

Mobile Decision Support Services - iNWS

Aaron Sutula
Douglas Hilderbrand
Wireless Weather Services Forum
June 28, 2011
Silver Spring, MD



MDSS - iNWS

- Users register and configure custom weather alerts.
- Preferences include geography and weather type.
- Alerts can be sent by text message and/or email.
- Desktop and mobile web interface
- Register at <http://inws.wrh.noaa.gov>



MDSS - iNWS Users

- About 14,500 today
- Currently limited to NWS partners
 - Emergency Managers
 - Media
 - Federal, state and local government officials
- Most efficient use of NWS resources while exploring cost, technical limitations of SMS, and public/private sector concerns.



InteractiveNWS

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Home My Alerts News FAQ About Login Register

 **iNWS – Interactive NWS**
National Weather Service Mobile Decision Support Services (MDSS)

iNWS MOBILE ALERTING

Receive customized text message and e-mail alerts for National Weather Service products that you care about.

Welcome.

InteractiveNWS (iNWS) is the home of new mobile and desktop innovations of the National Weather Service. This application suite allows NWS partners to receive National Weather Service products in new and innovative ways, such as text messaging and mobile-enabled webpages. iNWS strives to fulfill our mission of protecting life and property by using new technology to reach out to our customers.

Recent News.

- [New iNWS Terms of Use Are In Effect](#)
- [Text Message Alerts Unlocked for All iNWS Users](#)
- [New Version of the iNWS Web Page Released](#)
- [All Advisories, Watches and Warnings Restored to iNWS Text Message Alerts](#)
- [iNWS Text Message Alerts Limited to Warning Products](#)

iNWS is an experimental service intended for NWS core partners, including emergency managers, community leaders and other government agencies only. You are encouraged to complete a [short survey](#) on iNWS. See the [iNWS Service Description Document](#) for more information.

DOC – NOAA – National Weather Service – iNWS Version 4 – Switch to Mobile Version
[Privacy Policy](#) | [Terms of Use](#) | [FOIA](#) | [Information Quality](#) | [Disclaimer](#) | [Glossary](#) | [Texting While Driving](#)



InteractiveNWS - Register

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 **Interactive NWS Registration**

User Information

First Name:

Last Name:

Organization:

Job Title:

City, State:

Account Credentials

E-Mail:

Confirm E-Mail:

Password:

Confirm Password:

PLEASE NOTE:
INWS is intended for members of community emergency planning and response management (i.e. emergency managers, law enforcement, fire and emergency responders, transportation and safety managers, public officials), Skywarn Net Control operators, government partners of NWS offices, and members of the electronic media. Do **not** register if you do not fit this description.

Please note the following federal policy and executive order issued about texting while driving [here](#).

We collect personal information such as your e-mail and cell phone number in order to validate your account and to provide you with customized alerts that you select. If you have concerns about how and why we collect this data please read the [Privacy Policy](#) or [Contact Us](#) if you want more information.

See official NWS product description [here](#).

By clicking 'Submit Registration Request' you are voluntarily providing this information and agreeing to the [Terms of Use](#) and our [Privacy Policy](#).

Open "https://inws.wrh.noaa.gov/user/register" in a new tab



InteractiveNWS - My Alerts

http://inws.wrh.noaa.gov/alerts

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 **Interactive NWS My Alerts**

[Alerts Home](#)

[Account Settings](#)

[Logout](#)

iNWS Alert Areas

[Add New Alert Area](#)

[San Francisco](#)

[Pueblo Area](#)

[Parent's House](#)

[My Commute](#)

[My Alert Area](#)

[Denver, CO](#)

[DC Metro](#)

[Austin, TX](#)

[675 Wilson Ave, Salt Lake City, UT](#)

[Barbour County](#)

Hydrology Alert Points

[Add New Hydro Point](#)

[Brazos River at Aquilla \(AQLT2\)](#)

[Colorado River at Granby \(CBGC2\)](#)

All Recent Alerts

Event extended (both time and area) for [My Commute](#)

Winter Weather Advisory valid from Nov 9 3:00 PM to 9:00 PM MST [View More](#)

Sent to SMS and E-Mail at Nov 9 4:37 AM MST

Event cancelled for [Austin, TX](#)

Severe Thunderstorm Watch valid from Nov 2 2:59 AM to 5:00 AM CDT [View More](#)

Sent to SMS and E-Mail at Nov 2 2:59 AM CDT

New event for [Austin, TX](#)

Severe Thunderstorm Watch valid from Nov 1 10:05 PM to Nov 2 5:00 AM CDT [View More](#)

Sent to SMS and E-Mail at Nov 1 10:05 PM CDT

Event cancelled for [675 Wilson Ave, Salt Lake City, UT](#)

Lake Effect Snow Advisory valid from Oct 27 8:59 AM to 9:00 AM MDT [View More](#)

Sent to SMS and E-Mail at Oct 27 8:59 AM MDT

Event extended (time) for [675 Wilson Ave, Salt Lake City, UT](#)

Lake Effect Snow Advisory valid from Oct 27 5:48 AM to 9:00 AM MDT [View More](#)

Sent to SMS and E-Mail at Oct 27 5:48 AM MDT

New event for [675 Wilson Ave, Salt Lake City, UT](#)

Lake Effect Snow Advisory valid from Oct 26 11:25 PM to Oct 27 6:00 AM MDT [View More](#)

Sent to SMS and E-Mail at Oct 26 11:25 PM MDT

New event for [Barbour County](#)

Tornado Watch valid from Oct 25 1:34 AM to 9:00 AM CDT [View More](#)

Sent to SMS and E-Mail at Oct 25 1:35 AM CDT



InteractiveNWS - Alert Settings

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Interactive NWS Alert Settings

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iNWS Alert Areas

- Add New Alert Area
- San Francisco
- Pueblo Area
- Parent's House
- My Commute
- My Alert Area
- Denver, CO
- DC Metro
- Austin, TX
- 675 Wilson Ave, Salt Lake City, UT
- Barbour County

Hydrology Alert Points

- Add New Hydro Point
- Brazos River at Aquilla (AQLT2)
- Colorado River at Granby (CBGC2)

Email:

Cell Phone Number:

We support the following cell phone carriers:
AT&T/Cingular, Sprint/Nextel/Boost, T-Mobile, Verizon, Alltel, U.S. Cellular, Cellular One/Dobson, Virgin Mobile US, Cincinnati Bell, Midrivers, and Nemont/Sagebrush

Password: [Change Password](#)

Send alerts to email?
 Send alerts to phone as text message?

No longer want to use iNWS?



InteractiveNWS - My Alerts

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iNWS Alert Areas

- Add New Alert Area**
- San Francisco
- Pueblo Area
- Parent's House
- My Commute
- My Alert Area
- Denver, CO
- DC Metro
- Austin, TX
- 675 Wilson Ave, Salt Lake City, UT
- Barbour County

Hydrology Alert Points

- Add New Hydro Point**
- Brazos River at Aquilla (AQLT2)
- Colorado River at Granby (CBGC2)

Add New Alert Area or Hydrology Point

Select the type and format of alert area you would like to create.

- Create an alert point by city, zip code, or landmark.
- Create an alert area by county.
- Create an alert point or alert area by custom drawing.

Next



InteractiveNWS - My Alerts

http://inws.wrh.noaa.gov/alerts/edit

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iNWS Alert Areas

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- Pueblo Area
- Parent's House
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- Denver, CO
- DC Metro
- Austin, TX
- 675 Wilson Ave, Salt Lake City, UT
- Barbour County

Hydrology Alert Points

- Add New Hydro Point**
- Brazos River at Aquilla (AQLT2)
- Colorado River at Granby (CBGC2)

Create an alert point or alert area by custom drawing.

Using the map, draw a point, line or polygon over the area you wish to receive alerts for.

Navigate
 Draw Point
 Draw Line
 Draw Polygon

For 'Draw Point' - Single click to draw a point.
 For 'Draw Line' and 'Draw Polygon' - Single click to add points, double click to end drawing.

Next



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- Barbour County

Hydrology Alert Points

- Add New Hydro Point
- Brazos River at Aquilla (AQLT2)
- Colorado River at Granby (CBGC2)

Set Hydro Point Options

Select which alerts you would like to receive for your hydro point.

Select a Point: Colorado River at San Saba (SNBT2)

Alert Categories: Forecasted Flood Stage Change Observed Flood Stage Change

Create Hydro Point

Back



InteractiveNWS - Alert Information

http://inws.wrh.noaa.gov/weather/alertinfo/922141

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Hydrology Alert Points
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 Brazos River at Aquilla (AQLT2)
 Colorado River at Granby (CBCC2)

New Event for 675 Wilson Ave, Salt Lake City, UT
Lake Effect Snow Advisory valid from Oct 26 11:25 PM to Oct 27 6:00 AM MDT
 Sent to SMS and E-Mail at Oct 26 11:25 PM MDT

Radar Time: Oct 26 2010 11:25 PM MDT

UTZ002-003-006-271200-
 /O.NEW.KSLC.LE.Y.0001.101027T0525Z-101027T1200Z/
 NORTHERN WASATCH FRONT-SALT LAKE AND TOOELE VALLEYS-
 WASATCH MOUNTAIN VALLEYS-



User-customized, geographically enabled - iNWS

Alert
sent?



User-created geographic 'alert area'



NWS warning polygon/county/zone



User-customized, geographically enabled - iNWS

Alert
sent?

Alert for:

- Winter Weather
- Severe Weather



User-created geographic 'alert area'



NWS warning polygon/county/zone



User-customized, geographically enabled - iNWS

Alert
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Alert for:

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Alert for:

- Winter Weather

Alert for:

- Hydrology
- Severe Weather



User-created geographic 'alert area'

NWS warning polygon/county/zone



User-customized, geographically enabled - iNWS

Alert sent?



TOR

Alert for:

- Winter Weather
- Severe Weather

Alert for:

- Winter Weather

Alert for:

- Hydrology
- Severe Weather



User-created geographic 'alert area'



NWS warning polygon/county/zone



User-customized, geographically enabled - iNWS

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TOR

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Alert for:

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User-customized, geographically enabled - iNWS

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Alert for:

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User-customized, geographically enabled - iNWS

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User-customized, geographically enabled - iNWS

Alert sent?



TOR

TOR

TOR

Alert for:

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Alert for:

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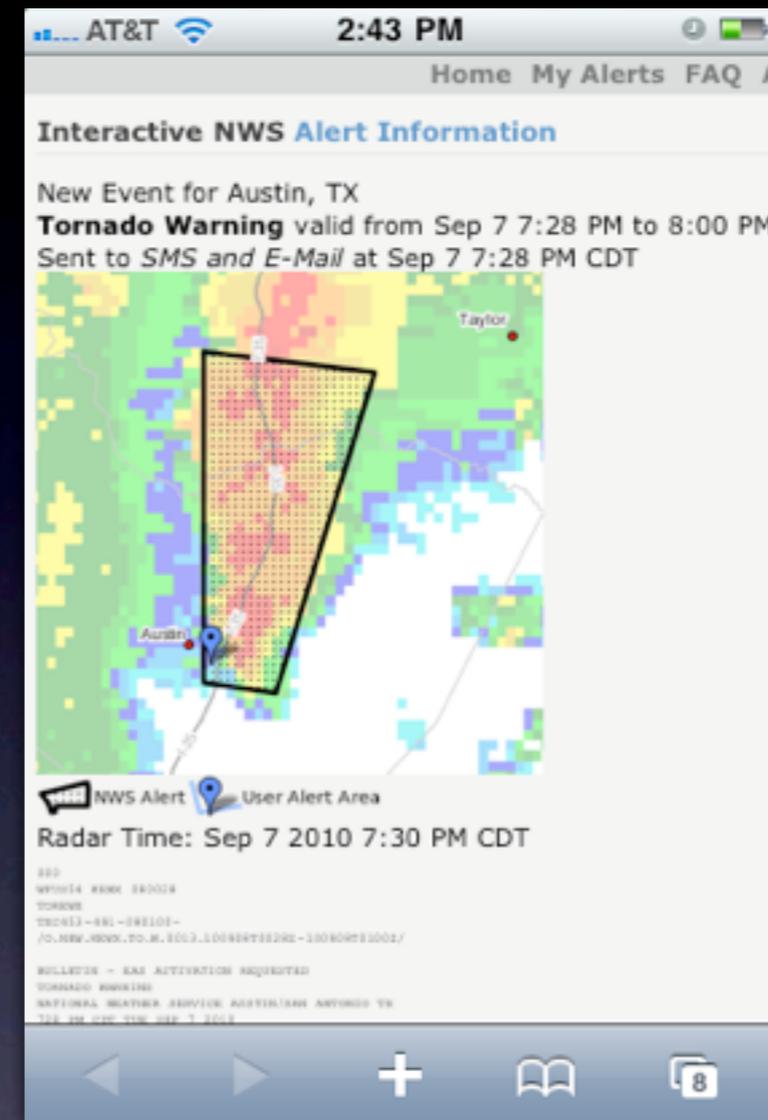
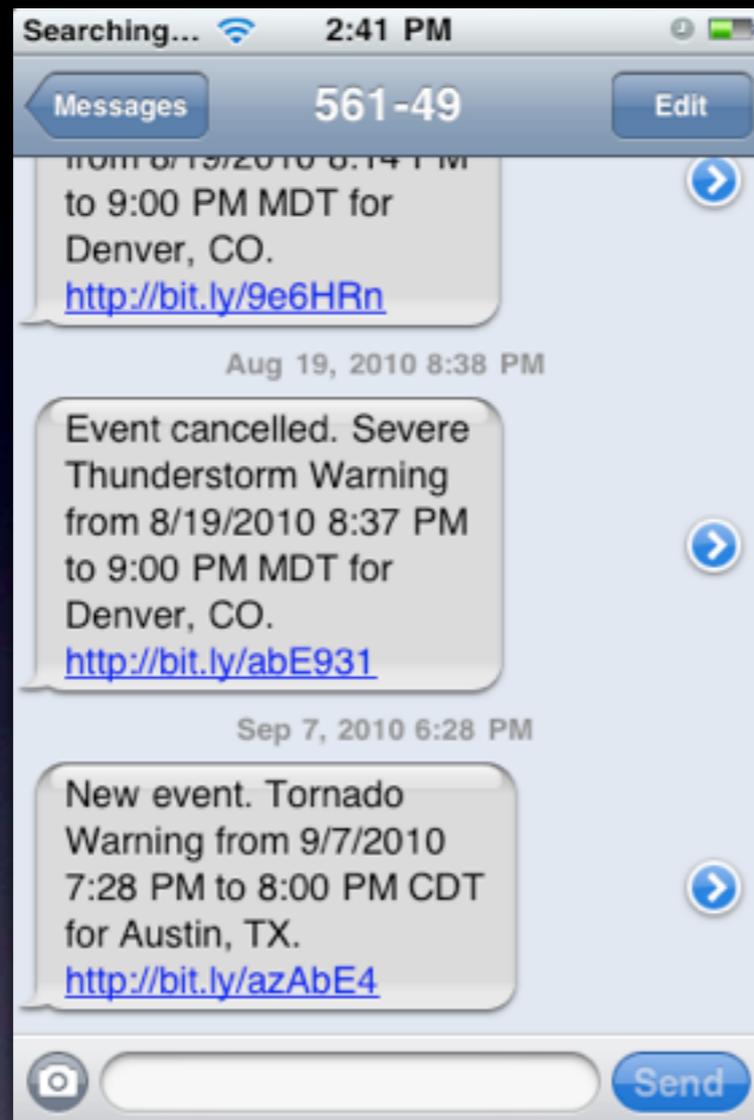
User-created geographic 'alert area'



NWS warning polygon/county/zone



Formatted and delivered alert



- Email delivery also supported
- Alert with embedded link is powerful
 - Attach additional information to a hazard
 - Expand what is available to users beyond the traditional text product

User Feedback

Craig Fugate (Director of FEMA)

Ties text with maps, gives better situational awareness...

public demands more for their federal dollars, with more smart phones, moves towards providing the public critical wx info in a format that meets their need, rather than making them fit the current system.



User Feedback

Virginia Dept. Emergency Management:

Complements NWR without the cost, and the flexibility to receive weather watches/warnings where ever you are



User Feedback

Member of the news media:

I can go about my weekend getting things done, and when an alert comes via text message, that will be my cue to look into the weather further or get into work immediately.



Near Term Plans

- Continue integrating MDSS - iNWS into official NWS dissemination systems
- Incorporate user feedback
- Use MDSS - iNWS infrastructure to feed CAP alerts to IPAWS



Future Plans

- Two tiered approach
 1. Evolve iNWS to provide enhanced Decision Support Services (DSS) to Core Partners
 2. Based on final NWS wireless policy, determine how/if a limited version iNWS would be appropriate for the general public



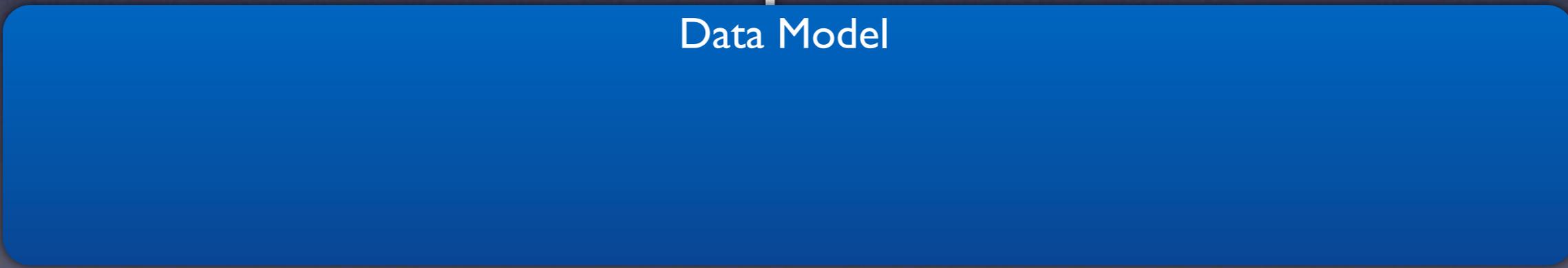
Decision Support Services

Should be...

- Impact based
- User defined
- Low latency
- Support decision makers through planning, response and recovery
- Flexible and responsive to user needs



Generating services from a collection of data



Generating services from a collection of data

Products and Services

NWS API

Product and Service Generators/Formatters

Data Model

Hazard Data



Generating services from a collection of data

Products and Services

NWS API

Product and Service Generators/Formatters

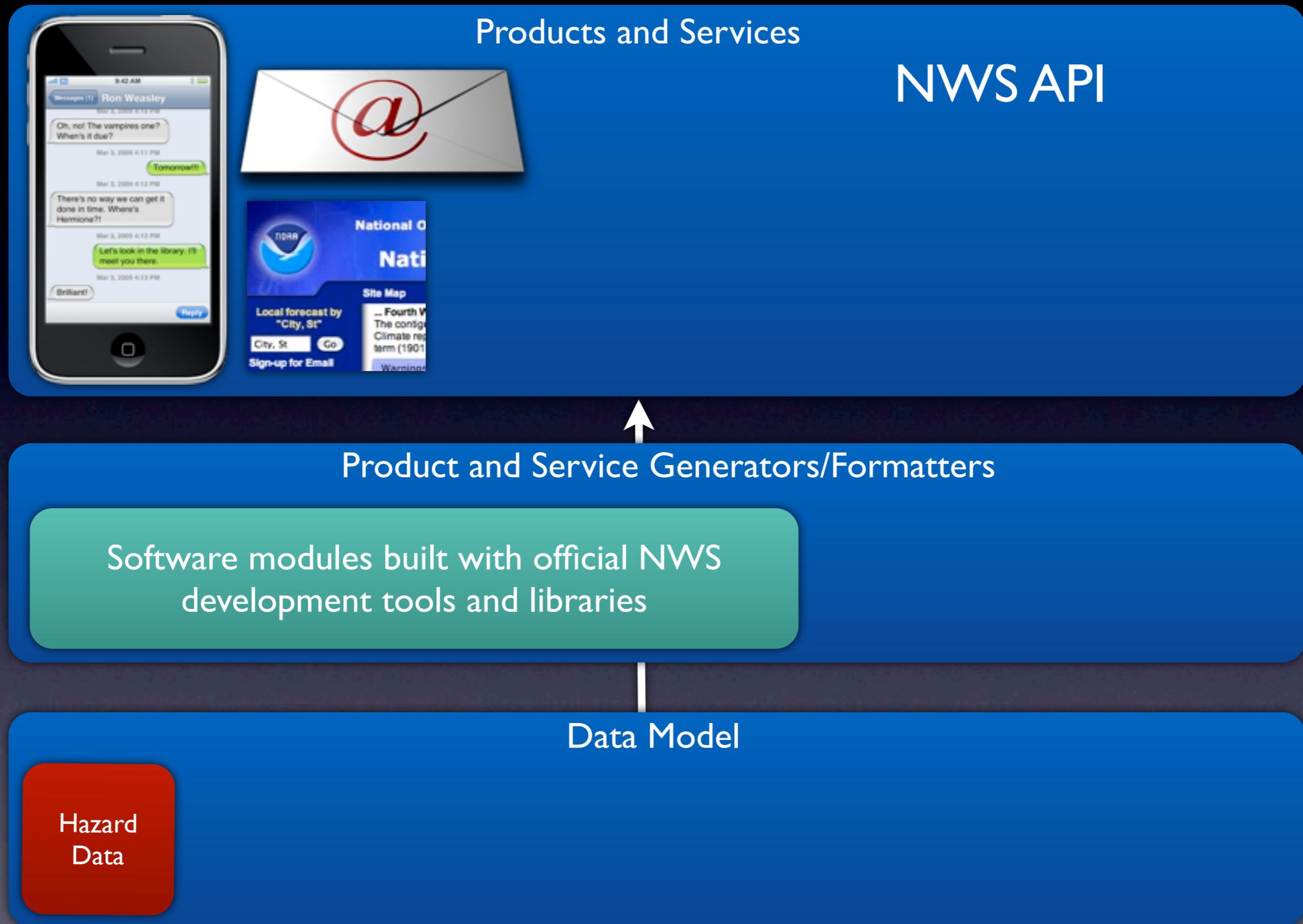
Software modules built with official NWS development tools and libraries

Data Model

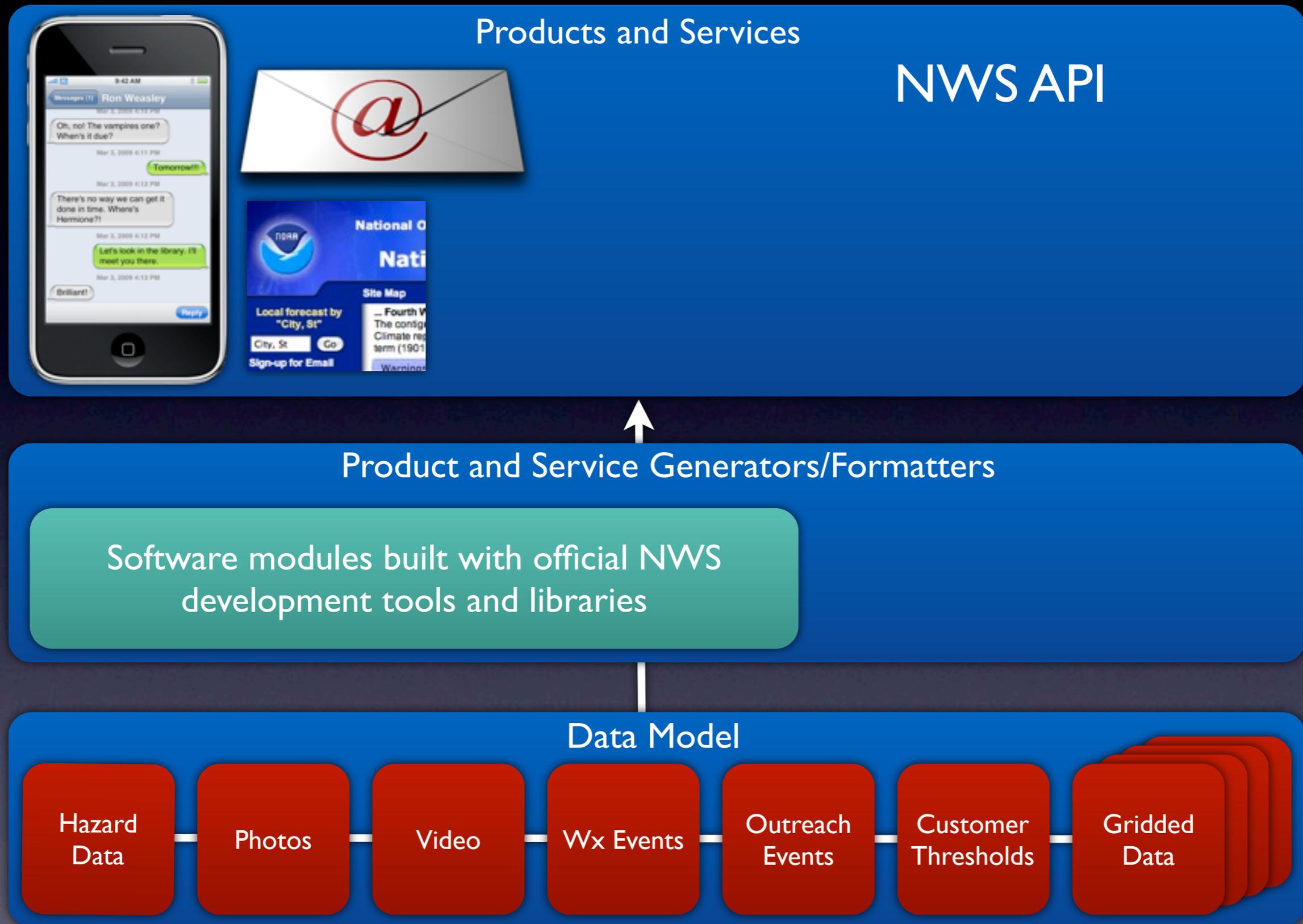
Hazard Data



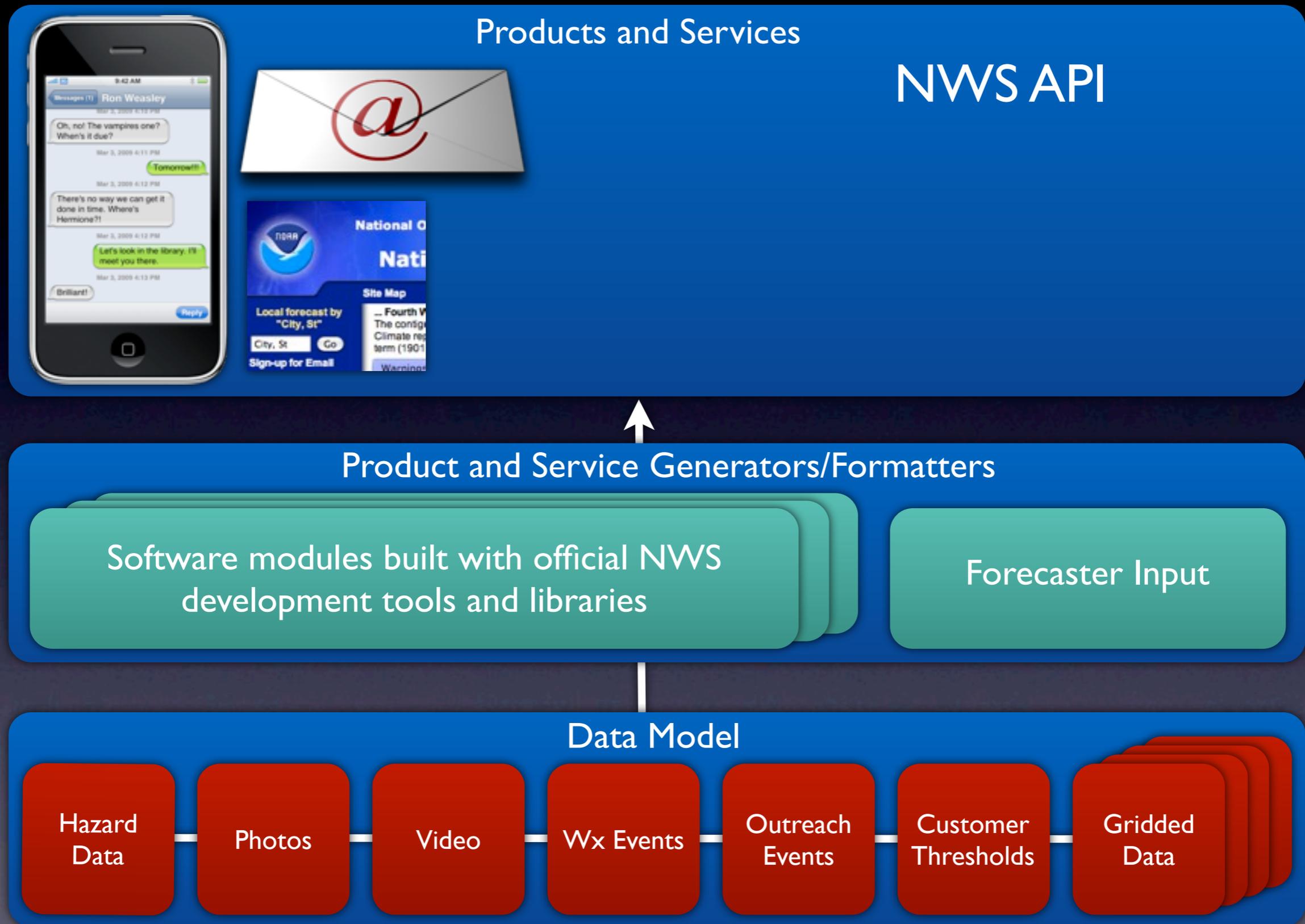
Generating services from a collection of data



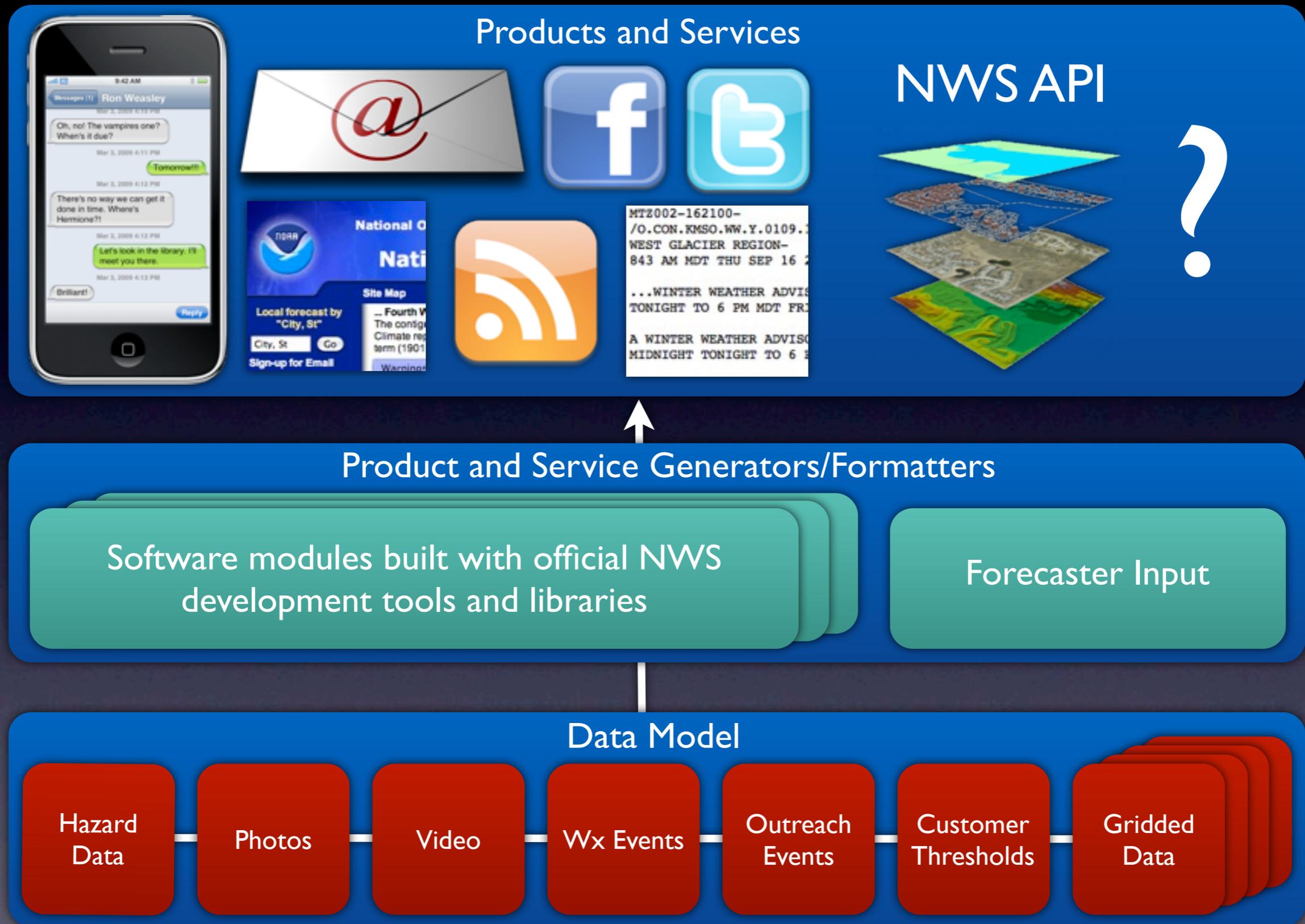
Generating services from a collection of data



Generating services from a collection of data



Generating services from a collection of data



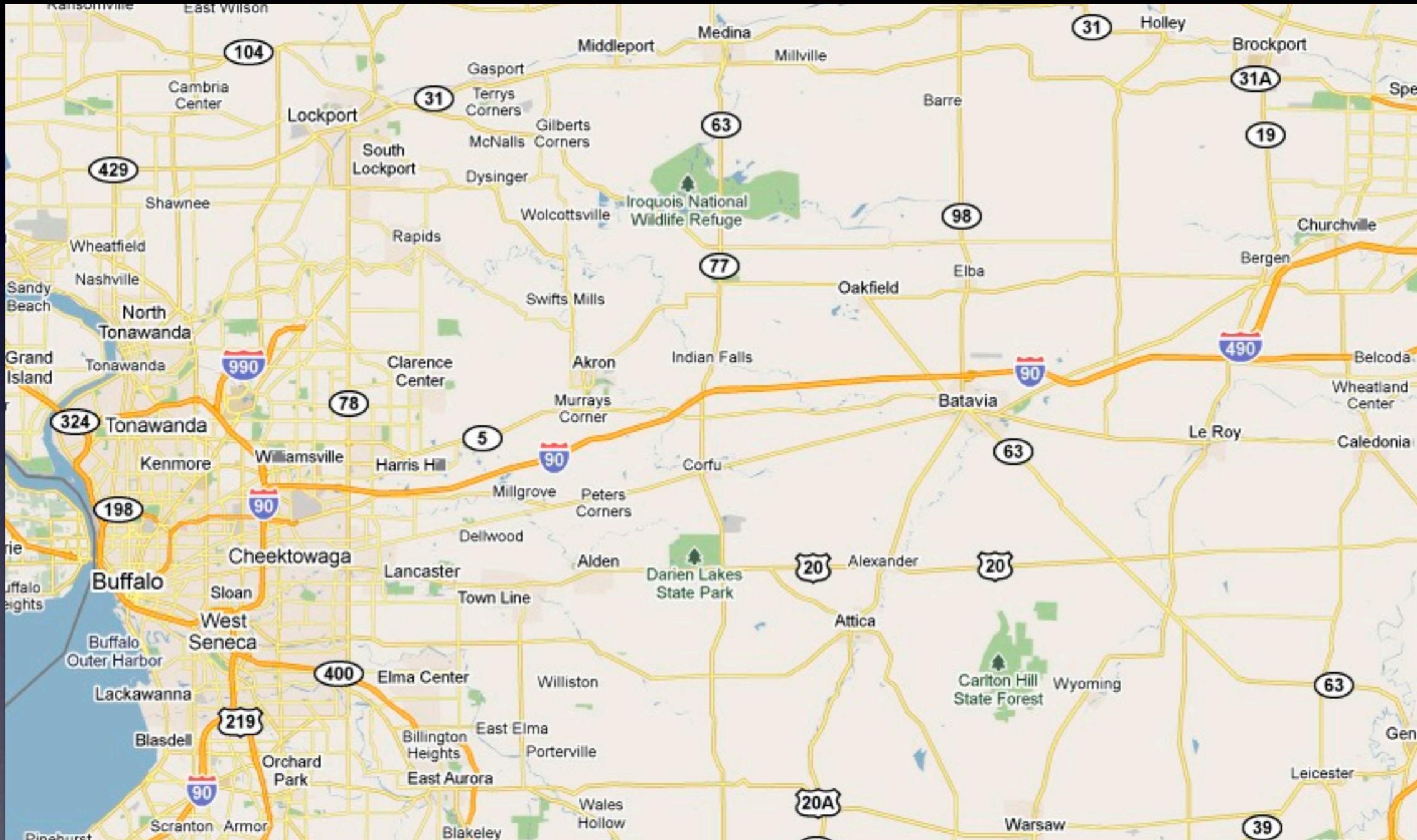
DSS - Impacts Catalog

- Core partner users input contact information and custom thresholds into an *Impact Area*
 - Geography
 - Hazard type
 - Hazard magnitude
- For each impact area, users supply what the impact is to them.
 - Gives NWS more context in a forecast or warning scenario
- NWS provides information and alerts to users based on their own impact areas



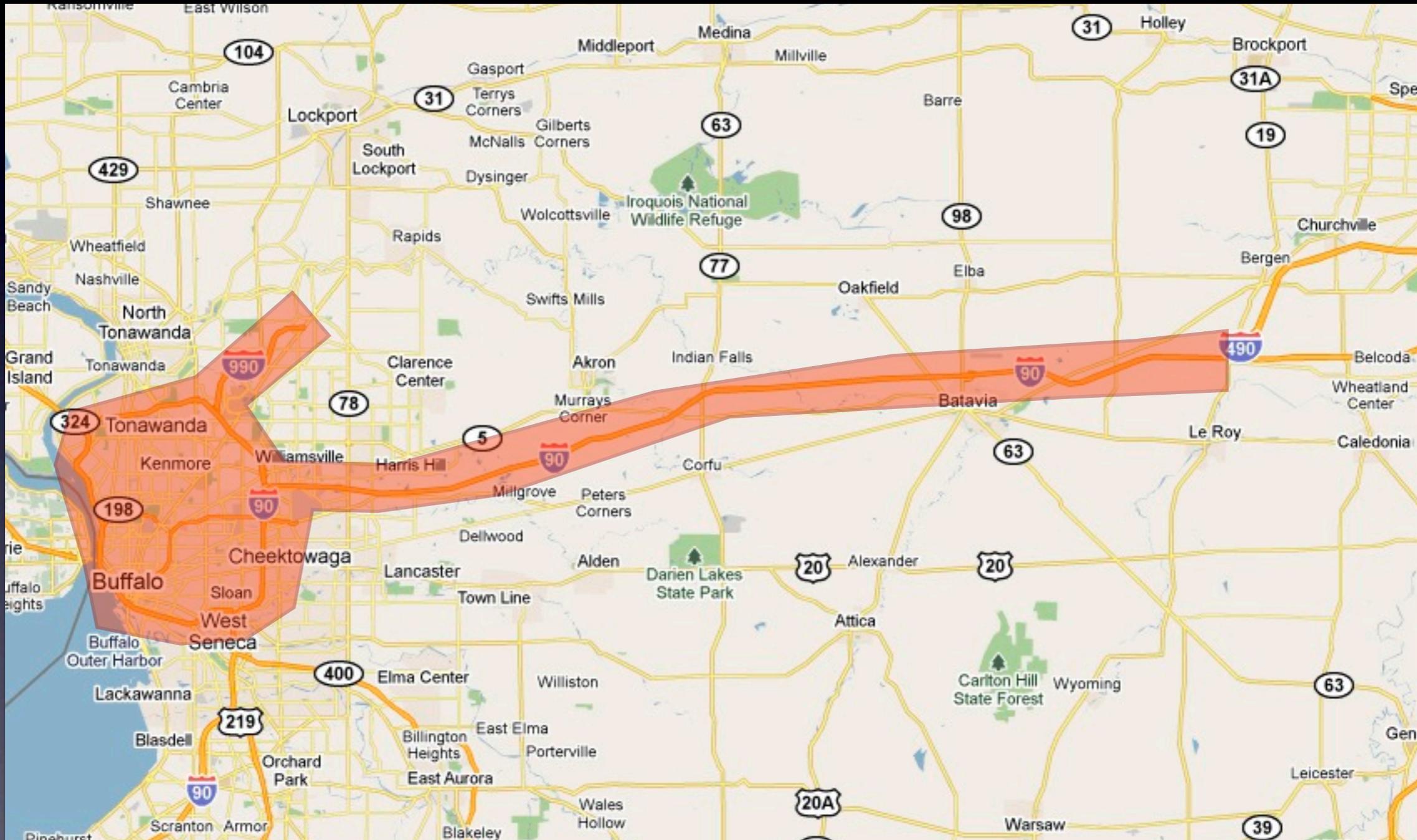
DSS - Impacts Catalog

A DOT Example



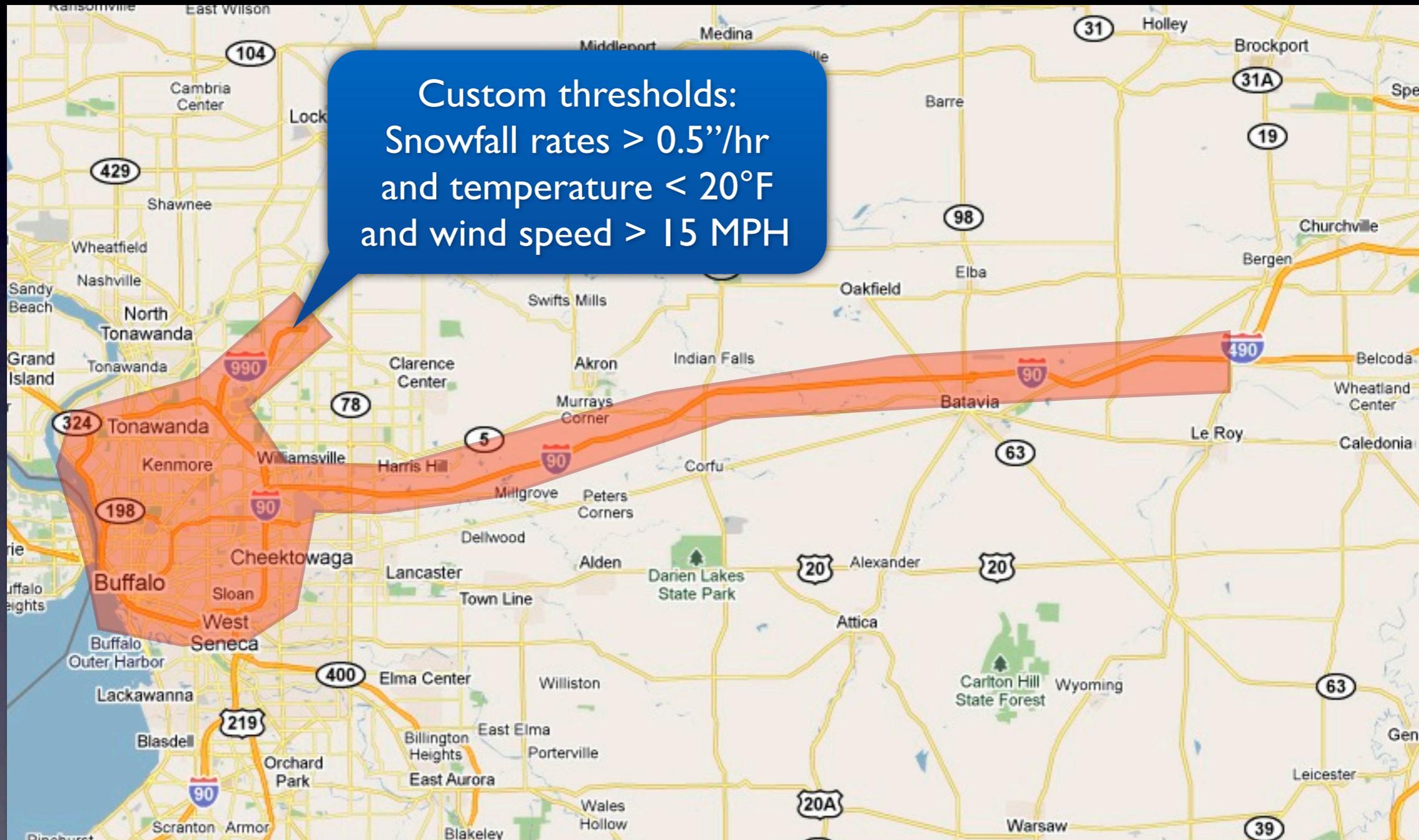
DSS - Impacts Catalog

A DOT Example



DSS - Impacts Catalog

A DOT Example



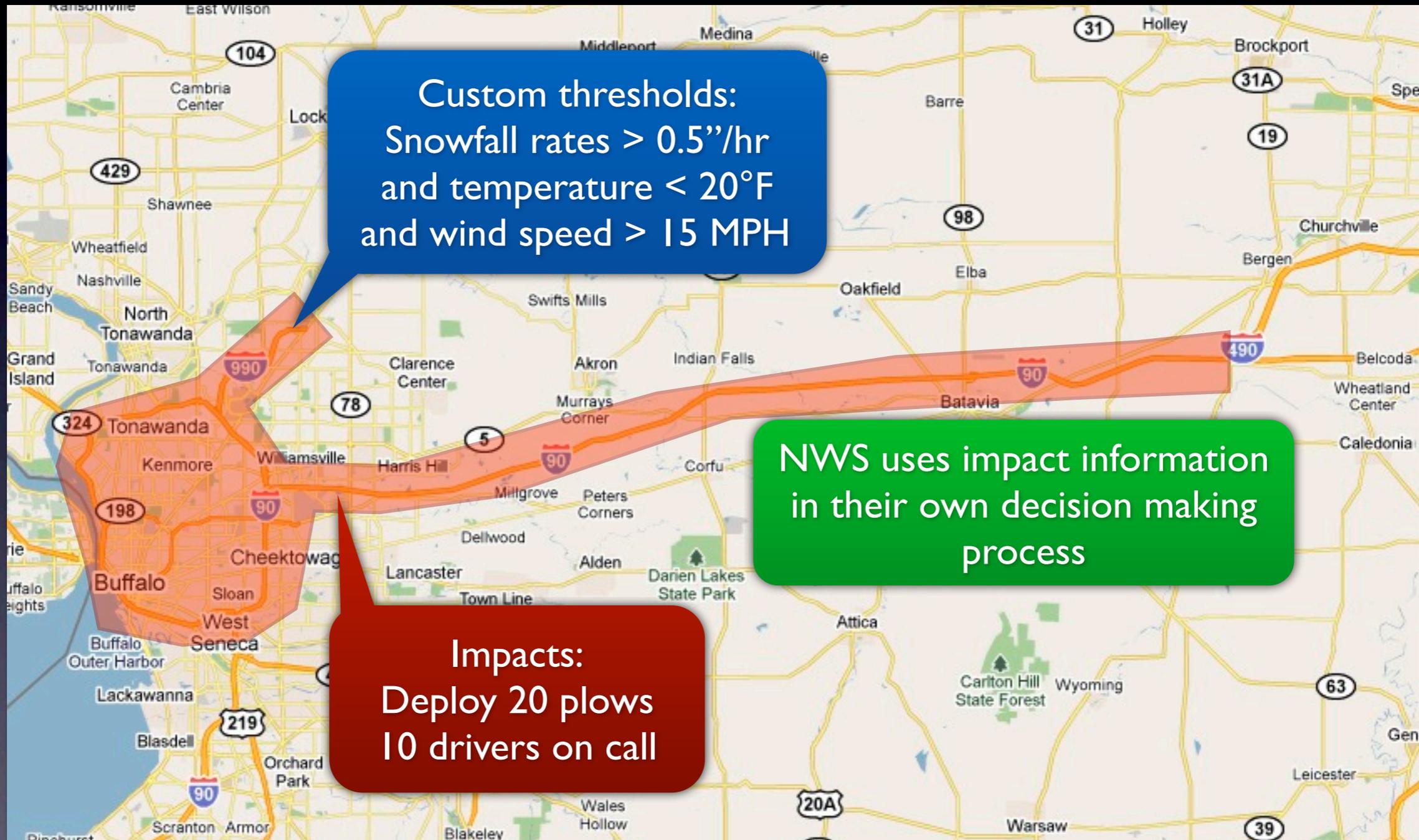
DSS - Impacts Catalog

A DOT Example



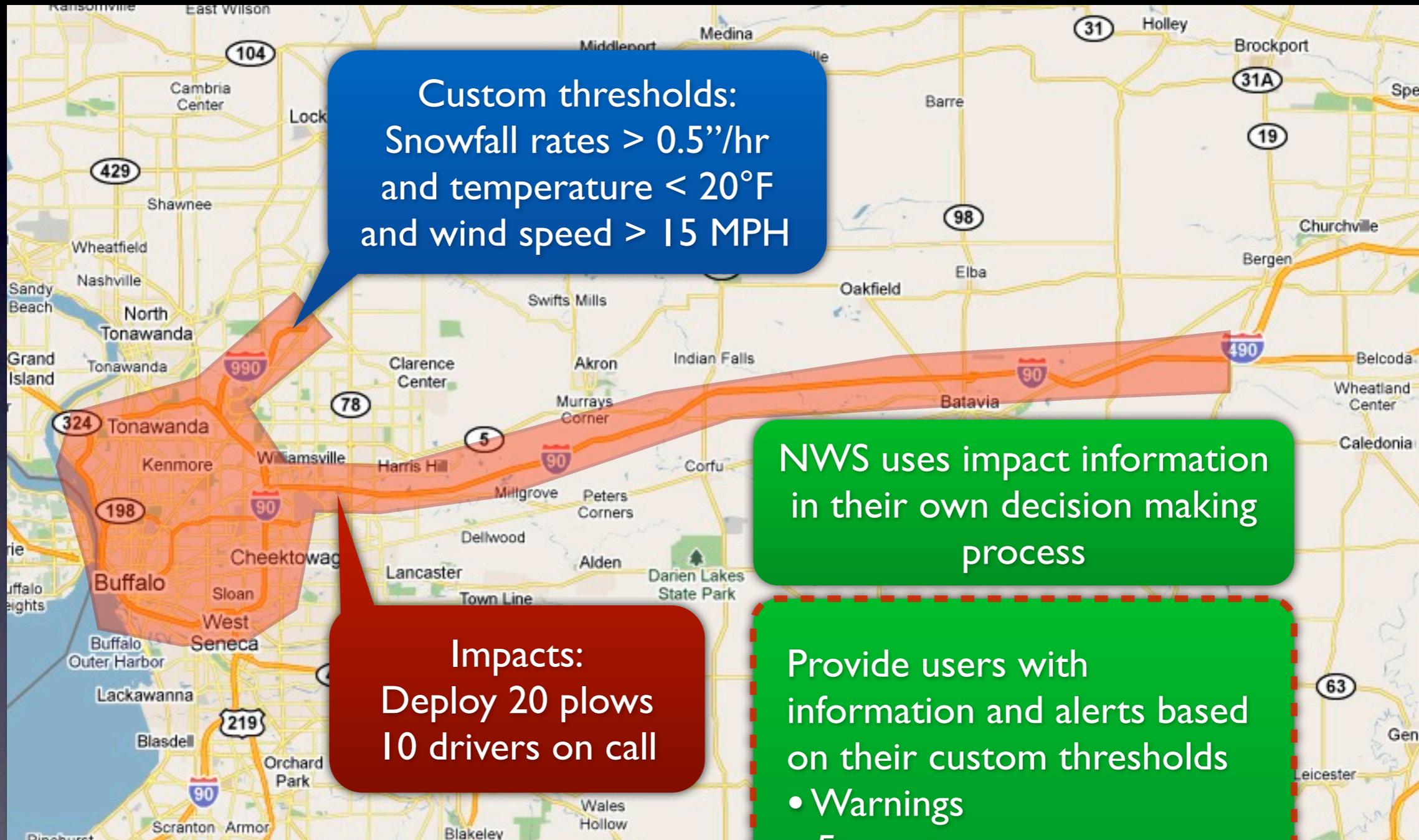
DSS - Impacts Catalog

A DOT Example



DSS - Impacts Catalog

A DOT Example



NWS uses impact information in their own decision making process

Impacts:
Deploy 20 plows
10 drivers on call

- Provide users with information and alerts based on their custom thresholds
- Warnings
 - *Forecasts*
 - *Observations*



Summary

- iNWS has been very successful service
- iNWS will feed data to IPAWS
- Plans to leverage iNWS to improve services to the public and provide DSS to NWS core partners
- Improved DSS is the future of the NWS
- Concepts like the Impacts Catalog will increase NWS situational awareness and provide core partners with improved DSS



Questions?

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